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[p. 120]

1: Lattimore H-4 (no date) 1950 AI1 Sinkiang AI1

[p. 121]

1: Lattimore H-4 (no date) 1950 AI1 Sinkiang AI1

563X
311

Tadjik

*563 The Sarikol Valley lies
131 close to the point where the Chinese,
Soviet and Afghan frontiers meet, but the frontiers are not well defined, have been disputed in the past, and may be disputed
[466] again. The Sarikolis are resentful of Chinese rule, especially because of the burdens imposed on them for supplying men and animals, without pay or for insufficient pay, to keep open a high mountain route between Sinkiang and India which is used by official travelers and to a smaller extent by traders. This discontent might take the form of an attempt to break away from Chinese rule, but if so it is not clear what other people they would prefer to join.

*563 There are two Iranian languages spoken in adjoining districts.
197 One is the Pamir group of dialects, spoken in the Wakhan Valley of Afghanistan and in the Mountain Badakshan Autonomous Region enclosed within the Tajik Soviet Socialist Republic. The other is Tajik. Thus the question whether the Sarikolis speak Tajik or Pamir Iranian is important, but there is as yet no authoritative answer.

*563 The Sarikolis are said by Grenard to be a remnant of the early
174 inhabitants of Khotan who left documents dating from the period 200–400 A.D. in the Saka language, a now extinct Indo-Iranian tongue. T'ang Dynasty Chinese records likewise describe the Sarikolis as identical in external appearance and language with
[779] the inhabitants of Khotan. At that time they were devout adherents of Buddhism, maintaining no less than ten monasteries in their little kingdom. The Chinese first conquered the region in the T'ang Dynasty and established there a military post which marked the extreme point of Chinese military occupation in Central Asia.

*563 Subsequently the people were converted to Islam. They now
779 adhere to the Ismaili sect of the Moslem faith, which acknowl-
212 edges the Agha Khan in Bombay as its head. Culturally they are extremely backward, and are still without a written language.

*563 The people live for the most part as settled cultivators despite
241 the fact that the Sarikol Valley nowhere drops below 10,000 feet.
311 Irrigation is practiced, and the main crops are oats, barley, and
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[p. 138]

1: Lattimore H-4 (no date) 1950 AI 1 Sinkiang AI 1
Tadjik
Chinese

legumes. Despite difficult conditions, the land is apparently capable of supporting a larger population than it does at present. In the T'ang Dynasty, the population was of such a size as to support five hundred monks and a military force of no less than a thousand men. In the last century the population has declined, in part because of slave-hunting raids conducted by peoples from northern India before and after the time of Yakub Beg.

At present the settled population lives in close contact with pastoral Kirghiz. The relations between the two groups appear to be friendly. On the other hand the relations of the Tashkurgan population with the Chinese administration have not been good in recent years. There existed in the area an organization known as the Partisans of the Red Tents — made up of Kirghiz or Iranians or both — which opposed the provincial administration and was friendly toward the program of the Kulja group. Whether the name of the organization is due to a more decided political coloring cannot be ascertained as yet.

3. NATIONALITIES WITH NO REGIONAL OR TERRITORIAL BASE OF THEIR OWN

Chinese. It is noteworthy that though Sinkiang is a Chinese province, there is within it no significant territorial enclave in which the population majority is solidly Chinese. Ever since the foreign policy of China first penetrated Sinkiang in the second century B.C., the Chinese have intermittently figured among the important population groups in the area, but not as colonizers who displaced the native population from large blocks of territory. In between the periods of their ascendancy they either remained as an alien minority, returned to their homeland, or disappeared in the savage massacres which they often invited by their own misrule.

In the second half of the last century the Chinese were almost wiped out in the great rebellions which shook the whole northwestern section of the Manchu Empire. Since then they have filtered back into the area. With the exception of criminal exiles sent to Sinkiang under the Manchu regime, the Chinese who have

1: Lattimore H-4 (no date) 1950 AI 1 Sinkiang AI 1

In Jungaria there is a little more rain, as much as ten inches a year in the more favored places, and here the desert is neither so vast nor so forbidding as in the Tarim Basin. There are fringes of grazing land on the slopes of the Altai in the north, the Tien Shan in the south, and other ranges in the west, but the herds must move frequently and the men who own them must move too, leading a nomadic life. Men learned to live in this land of poor rainfall only by learning how to master the animals which ate the grass which they themselves could not eat.

In addition to irrigated agriculture there is some dry farming in Jungaria, particularly in the river valleys along the Soviet frontier. Along this frontier, which rarely follows the watershed, three important rivers have their source in Sinkiang and their main course in Soviet territory. They are the Black Irtish, the only Sinkiang river whose waters reach the sea, and the Emil and the Ili, which are routes of communication between Soviet and Chinese territory.

The broad and fertile Ili Valley is enclosed between two arms of the Tien Shan which open toward the west into Soviet territory. It thus forms a distinct region which has closer geographic ties with Soviet territory than with Sinkiang itself. Its forests, mines, rich mountain pastures, and fertile arable lands offer the best prospects for economic development north of the Tarim Basin, but it has never enjoyed a sufficiently long period of peace and sound administration to permit exploitation of its resources. It has been fought over during the successive waves of migration and was largely depopulated in the eighteenth century. At present the valley supports an agricultural and nomadic population of less than half a million.

Both oasis agriculture and pastoral nomadism are such highly specialized ways of life that throughout the history of Inner Asia men never learned how to combine them. Cultivators and herdsmen fought each other, traded with each other, and sometimes ruled each other, but they never fused together in a new, mixed, and permanent society.

The totally new factor of machine-powered industrialism is

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

636 brigands who infest Kansu, Szechwan and other western provinces are unknown in Sinkiang, which a European may traverse unescorted and unmolested from end to end. Conditions, indeed, vary in the different districts according to the energy and efficiency of the Magistrate of the time. Like crows round a corpse, thieves flock to a district to which an opium-smoker has been appointed, while they desert that of an energetic "Amban" as rats a sinking ship; but in general it may be said that life is safe everywhere and property as secure as in most European countries. Moreover, to Governor Yang and his subordinates must be given credit for what is probably a higher degree of prosperity and contentment than the country has known, at any rate since ancient times. They do not make the mistake of crippling agriculture by oppression and otherwise killing the goose that lays the golden eggs. They come of a race which has two thousand years of administrative experience behind it, and knows well how to base its power upon the strong rock of agricultural prosperity. Oppression exists, but it is chiefly by Turki minor officials, and the District Magistrate is usually there to appeal to in case of need. The predecessors of these same "Begs" were far more rapacious in the days of Yakub Beg, who was of the same class and type as themselves. Then, there was no appeal. Instances of serious and prolonged oppression by Chinese officials under the present régime are rare. A notable case in our time was that of General Ma Titai, the history of whose crimes and of the doom which avenged them will be found in a later chapter. With the exception of land revenue, the taxation is almost entirely indirect; the incidence of the former is light, even taking into consideration the varying proportions over-collected by the Ambans for their own pockets; while the taxes on internal trade are farmed by Turki contractors who, like the Begs, dare not go too far in the mulcting of their own fellow-countrymen. At any rate, the fact remains that the population is steadily increasing and every year more and more land is being taken into cultivation. We saw the process going on in several of the districts we visited, notably in Maralbashi, Posgam and Karakash.[1] District

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[161]

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[1] Already the Merket subdivision of the Maralbashi district, two marches down-river from Yarkand, is too big to be administered effectively from Maralbashi, and there is talk of its being erected into a separate third-class district, just as was done a few years ago with Posgam when it was separated from Karghalik, a new bazaar built and a third-class magistrate installed.

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

Magistrates who succeed in bringing a certain area of new land into cultivation—35,000 *mu* or about 6,000 acres, I believe—receive a good mark at headquarters and are singled out for promotion. This results occasionally in money being wasted on canals along which the water will not run—" Amban's Follies " we used to call them—but it meant that ambitious Magistrates encourage the spread of cultivation in every way and see that new settlers are left alone by the tax-gatherer. For three years a settler on new ground pays no revenue, and half-rates for the next three.

It is true that moral and intellectual progress does not exist in Kashgaria. There are no schools except those attached to mosques, at which nothing is taught by the mullas but reading, writing and the Qur'an. By means of a strict censorship not only are books and all written or printed matter dealing with current events kept from the hands of Chinese and Muhammadans alike, but the dissemination in writing of news or of any ideas whatever among the inhabitants is effectually prevented. All this, no doubt, is highly reprehensible from the point of view of the democratic idealist. But after all, if the greatest happiness of the greatest number is the *summum bonum* for any community, as some people are still old-fashioned enough to believe, there is a good deal to be said for it. At any rate, in this twentieth-century world of hustle and the Yellow Press, of merciless competition and all-pervading publicity, one may be forgiven for hoping—selfishly, perhaps—that a corner of the earth may long be spared in which a peaceful, contented, simple, lovable and by no means uncivilized population exists without motor-cars or cinemas, without newspapers or telephones, without broadcasting or advertisements, without a mile of railway or even of metalled road, a land steeped in the Middle Ages, picturesque and quaint almost beyond belief—truly an Arcady of Cathay.

Of our life and work at Kashgar the part that D. and I liked best was the touring, of which we had plenty. Though the trade between India and Chinese Turkistan is strictly limited by the great length and difficulty of the Leh route, the number of Indians connected with it who are permanently or temporarily resident in the oases of the Tarim Basin is surprising. At Yarkand alone there are usually between 100 and 150 Hindu traders, most of them representing firms in one or other of two Punjab towns, Amritsar and Hoshiarpur. Sindhi money-lenders from Shikarpur ply their trade at Yangi

3: Skrine G-3 (1922-1924) 1926 All Sinkiang All

case arose in connexion with the murder of a British subject by his son at a village in the Yarkand district, and it became necessary for me to confer with the Amban of Yarkand at his headquarters. The march of 45 miles to Yarkand occupied a day and a half and led us through country which alternated between desert-poplar forest, marshes and cultivation. The display of bird life among the marshes along the right bank of the Yarkand River was astonishing. We saw none of the rainbow-plumaged " Shaw's pheasant " supposed to haunt these jungles, but among the reedy lakes and water-channels all along the road there was every now and again a mighty cackling and splashing of duck, geese, teal, cormorants, cranes, terns, plovers, coots, water-hens and many kinds of lesser fowl. A Paradise indeed for the naturalist and even for our ignorant selves, could we but have spared a few days to explore these little-known wilds with gun and camera. The Yarkand oasis was entered at Abad, a village of several hundred families living on land brought into cultivation twenty years before by an Amban called Liu, who used prison labour to dig a canal from the Yarkand River. This was one of several instances I came across in the Yarkand neighbourhood of cultivation being extended by enterprising and ambitious Magistrates. The area of this great oasis must be now at least twice what it was fifty years ago under the indigenous rule of Yakub Beg.

The five days my work occupied at Yarkand passed pleasantly enough at the garden of the Bar Gah, now a mass of snowy blossom, and while I sat in conclave with Amban or Aqsaqal, D. amused herself with shopping in the kaleidoscopic bazaars and exchanging visits with Swedish, Chinese, Indian and Turki friends. Once she was entertained at tea in the grand manner by the entire community of Hindu traders at their big caravanserai in the middle of the Old City, during the course of which a bowing young *bunnia* informed her that he knew the *Generail-Consul-Sahib* (i.e. me) quite well, as he had been a waiter at the United Services Club at Simla in 1920 when I had quarters there! Since then he had given up the job in order to join his brother who represented an Amritsar firm at Yarkand. Her visit to the Yamen to see the wife of the Amban was a somewhat difficult one. She found a child of eighteen, a forlorn, rather pathetic little figure dressed up like a doll, who almost died of nervousness and said through her Turki maid, " Please forgive me, I don't

S N 311 The newest development, found in the Northwest, especially in Sinkiang, is the partial industrialization of those areas which are the sources of coal, oil, gold, iron, alum, quartz, gypsum, nitrates, salt, and as recently reported, uranium.

S N 563 The non-Chinese peoples of the Northwest are not only outnumbered b ut also outweighed in economic and political respects. For more than two thousand years, the Chinese have been ruling those areas (with short interruptions as far as Sinkiang and Chinghai are concerned), even though they never had more than a few garrisons stationed in frontier areas. Those garrisons made it possible for a thin stratum of Chinese officials to rule the areas on the top level. On the lower level, the indigenous peoples and tribes governed themselves - under the supervision of the Chinese viceroys or governors and their bureaucracy.

S N 175 642 197 631 The general policy of the Chinese government in Peking was to make use of the existing form of governmental institutions of frontier areas like Sinkiang, Chinghai, and Inner-Mongolia. In Sinkiang (prior to 1884 it was called "Hui-chiang," i.e., Muslimic Dominion), two types of local government had existed: the Muslimic type and the Mongolian type. The S [171] Northern and Northeastern part of Sinkiang, where the Mongols were the dominant inhabitants, had the same governmental institutions as Outer and Inner-Mongolia, namely,banners S N [668] [565] ruled by dzasaks, who were appointees of the Emperor in Peking. The Republic of China tacitly recognized their ranks and interfered very little with their functions. Only Communist China deprived the nomad aristocracy of their titles and rights.

175 631 795 649 659 The Muslimic communities were fuled by Bäks with various ranks: the Ak'im Bäk,"local governor"; the Ishkhan Bäk, "assistant governor"; the Shang Bäk, "collector of revenue"; the Qazi, "judge"; the Kukbashi or Mirabu Bäk, "superintendant of agriculture"; Yüzbashi, "hundred-men-leader"; Onbashi, "ten-men-leader"; etc. All the local Bäks were appointed by the emperor or later on by the president of the Republic upon the recommendation of the Imperial or Republican governor, although it must be stated that some governors of Sinkiang, Chin Shu-jen and Sheng Shih-ts'ai, ruled and governed the province without asking Peking for the consent of appointments.

S N 175 631 647 [202] Besides the Chinese civil service there existed Chinese military staffs and detachments, centered in Ili, Urumchi, Kulja, Chuguchak, Kashghar, Sining, Su-chou, Lan-chou, etc. Relay stations provided communication between the government in Peking and the frontier areas. Maintaining the effectiveness of the means of communications was an important duty of 000 Chinese officials. Only since 1930 have some automobile highways been built, and the Communist regime, in cooperation

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631 political and military reasons. After the last British Consulate
131 of Kashgar was closed, the curtain has become even more
668 impenetrable there than in any other part of China. Not even
197 Chinese are allowed to travel into Sinkiang without special
[648] permits.

N F. Northwest As An Outlet for Chinese Overpopulation
167 The Northwest Region has been long regarded by the Chinese
185 as one of the major outlet areas for China's overpopulation. Once the plans to conserve water and soil are completed - especially along the Yellow River in Shensi and Kansu - arable land will be considerably extended. But water and soil conservancy will involve a lot of problems before the land is actually made productive - not to mention that its sustaining capacity is limited. Therefore the Northwest as an outlet for China's overpopulation is tentative and should only be regarded as a partial and temporary solution.

N 1. Extension of Arable Land by Irrigation and Soil Conservancy
311 According to plan the irrigated area in the mid-Yellow River
185 Basin will grow from 12,717,000 acres at present to some 19,105,000 acres. Agricultural output in the irrigated area will more than double. Annual grain output will increase by 6,741,000 long tons and cotton by 590,000 long gons. The loess regions with their barren mountains and desolate gullies covering 143,000 square miles, will become a land of plenty. Most of the land for irrigation development under the project will be in the provinces of Shensi and Kansu. ("China's Sorrow" Will Be No More - The Taming and Exploiting of the Yellow River, by Li Jui, People's China, August 6, 1955, p. 9-15).

S The area of arable land in Sinkiang has also been extended,
311 but it is not easy to ascertain by how much or by what means.
185 In 1953 it had reached twenty million mou, 4,100,000 more than in 1949 (PD. August 28, 1955); in 1954 more than 5,000,000 mou above 1949, i.e. a total of 21 million mou (KM. September 15, 1955; by 1955 22 million mou (PD. October 31, 1955).

According to the above figures, the increase between 1949 and 1955 would be six million mou. But there appear some discrepancies with other information. The difficulty is that the 1950 data for the extension of arable land in Sinkiang was not 16 million but 18.195 million mou (Newspaper Reading Handbook, Hankow, p. 25, 1950). Thus if the present data are reliable, the 1949-55 increase would be three million mou instead of six million, of which 1,100,000 mou are due to the labor of the Army Agrarian Production Troops.

S According to official reports, in 1953, 1.6 million tons of
433 food stuffs were produced in Sinkiang (PD. August 28, 1955). About the production in 1954, it is known that there was an

433 increase of 11.5 percent in the combined areas of Inner Mongolian, Sinkiang, and T'ung Autonomous Area in Kweichow. (KM. October 4, 1955). Supposing the increase in Sinkiang was ten percent which owing to the heavy natural disasters in 1954 is probably too high an estimate, it would mean 1.76 million tons of food stuffs in 1954, i.e. about 430 catties per head. In this context, a report which claimed that food production is 747 catty per head was published (KM. September 15, 1955).

311 312 185 Soil conservation is just as important as water conservation in land reclamation in arid and semi-arid areas. Human survival in Sinkiang for over 2,000 years has been involved in a continual fight against the aridity of the climate and the central Asiatic agricultural alkali, salt-saturated soil. Every year's floods convert even hitherto fertile lands into alkali, sterile soil. There are "Kariz" wells which are connected by underground canals, reaching a total length of 2,500 km. between Hami and Turfan only. This is evidently a means of combating the impermeability of the soil, which makes surface irrigation harmful.

503 653 According to 1954 Government Reports, 50,000 long or short canals with a total length of 30,000 km. have been repaired by the Army and by the people. (PD. August 28, 1955). In an October 1955 report: 1,600 canals are under repair and also 1,500 wells have been added (PD. October 21, 1955).

311 312 185 Large scale irrigation and water conservancy work are at present in the state of planning only: survey works are going on at the Manas and Urumchi Rivers and at the Turfan Basin for the future building of larger irrigation works and hydraulic power stations. (PD. October 31, 1955). But to fight against alkali soil will remain a continuous problem in land reclamation in Sinkiang as well as elsewhere in the arid and semi-arid Northwest of China. It was reported in 1955 that 300,000 mou of alkali land were reclaimed around Chigalik Lake in the northeast Hami area, and southwest Aksu. Rice has been planted in the former too, and cotton in the latter area. How long will the newly reclaimed land reclaim productive under the ever-increasing accumulation of alkali in the soil is still a problem which remains to be solved.

433 2. Soldier Colonization

433 648 167 466 Although no data concerning the exact number of Chinese soldiers in Sinkiang are available, the figures must be enormous - judged by the gigantic work undertaken by Chinese soldiers under the name of "Production and Construction Troops of the Sinkiang Military Area." One million one hundred thousand mou (166,000 acres) of the three million mou extended arable land during the period 1949-55 are due to the labor of the Army

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433 Under land reform in Sinkiang, on the average, 2.5 mou were
S distributed per person. (PD. August 28, 1954). According to
[161] the 1953 census - Sinkiang has a population of 4,873,608.
That means the average acreage per head would about 4.5
mou instead of 2.5. Taking this as a basis, the estimated
110,000,000 mou of possibly extended land for cultivation
can accommodate nearly another fifty million people; that
S will be ten times larger than its present population.

N Land reclamation by the development of irrigation in
311 Chinghai province and former Ninghsia along the Kansu
312 Corridor is not as promising as in Sinkiang and the mid-
185 Yellow River drainage area of Shensi and Kansu, because
of the limited amount of snow over the nearby high mountains.
Another three million people (twice its present population)
would be the most that Chinahai could support by land reclama-
tion for agriculture and pastoral development.

Summing up all the possibilities, an approximate total of
another fifty-five million people which is nearly one and a half
times the amount of its present total population can be support-
ed at the present standard of living by the development of
irrigation in land reclamation in the whole Northwest Region
N of China. According to the 1953 Census, the Northwest has
[161] a total population of 35,359,525 with an annual natural in-
crease at a rate of twenty per thousand as the Chinese Commun-
ists claim. That means an addition of more than 700,000 people
are added by natural increase each year. In approximately
seventy years, another fifty-five million people will be added
to its present population by natural increase only. But in view
of an annual natural increase of nearly twelve million for the
whole population of China, the Northwest can be used as a
reservoir for the nation for a period of only four years.
Therefore the Northwest is extremely limited as a population
outlet for China. And the conversion of 110 million mou into
arable land in Sinkiang is itself a gigantic task to fulfill; and
conservancy of soil and water can hardly cope with the natural
increase in population. Land reclamation in the Northwest
should be regarded as a means of improving the living standards
of the people rather than as an outlet for any further increase
of the population.

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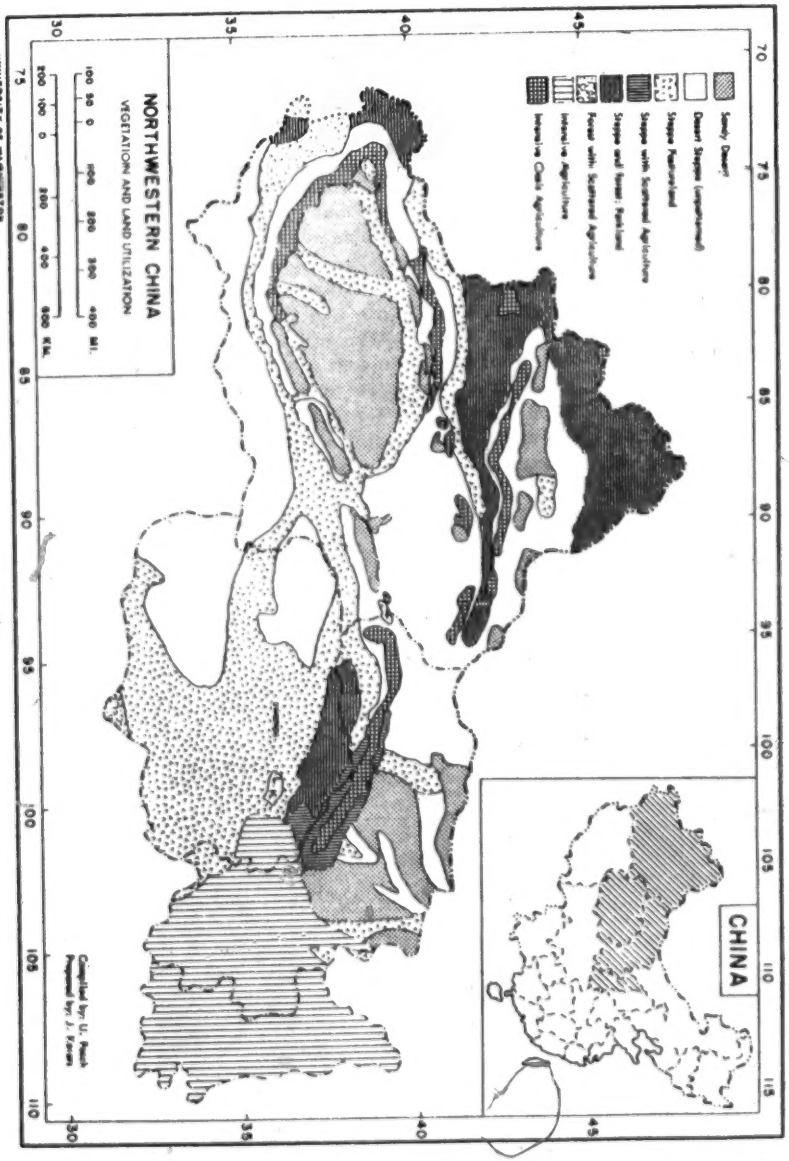

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S 592 241 423 0.58 acres per capita as against 0.68 in China Proper. It is difficult to obtain a picture of the land tenure system because of the lack of data. But according to a field survey referred to by Owen Lattimore covering sixty-five households in two villages in the Khotan oasis, the smallest farm was 1.08 acres and the largest farm was eight acres. A further breakdown revealed that S (184) rich peasants in this group had average holdings of eleven acres, middle peasant 5.7, and the poor peasants 2.8 acres. In the area where this survey was conducted, it seems that the farms of the poor were too small for the efficient use of draft animals and there was the problem of efficiently employing, on a tiny farm, the labor potential of the large Uighur family. (Pivot of Asia, p. 169.)

S 4. Forestry

S 311 313 There is forest land in the rich Ili valley but it is questionable whether much timber can be exploited without serious damage to the soil. Since much of Sinkiang is desert and wasteland there are few forest reserves; out of the total Sinkiang area only about five per cent is forest land.

C. Kansu, Shensi, Ninghsia, and Chinghai

N 1. The setting

N 133 134 (243) J. L. Buck refers to this part of the Northwest as the spring wheat and winter wheat-millet area. In the spring wheat area (northern Kansu, Ninghsia, and Shensi) high hills, small mountains, and narrow irrigated valleys characterize the best agricultural land. But along the great wall in Shensi, Ninghsia and Kansu are many undulating sand dunes extending from ten to seventy miles both northward and southward. When the Mongols occupied this region, these dunes were covered with grass and shrubs, but where the Chinese settled here, they cultivated the slightly more fertile land in the depressions between the dunes; once the grass was destroyed the winds blew the sand so as to make farming impossible and other nearby good soil was covered with the blowing sand. Grass in such land can seldom be resodded, and it is thus that land once useful, at least for pasture, is now entirely destroyed.

N 133 134 243 The winter wheat-millet area (southern Kansu, Ninghsia, and Shensi) extends over a great part of a loess-covered plateau, a high, dissected peneplain, carved largely from red or purple sholes and conglomerates, covered with deposits, largely lacustrine, and blanketed by wind-blown dust, known as loess, which varies in thickness from about twenty to more than 150 meters. The fields in this region are very irregular and small, and most of the surface is so eroded that cultivation is difficult and much terracing is necessary.

N 132 The climate is cold, dry, and windy in winter. The typical precipitation is low, about fourteen inches, and exceedingly

161 About two-thirds of the total area of Sinkiang is uninhabited.
311 In 1946 the number of farm households was 344,000 and the average number of acres per farm was around 7.1. (Cressey, Land of the [114] 500 Million, p. 105. This figure, according to other sources, is rather high.. These sources give a figure of from 0.5 to three acres per farm.) The total amount of cultivated land was 2,455,000 acres or roughly one per cent of the total acreage of the region. The greatest concentration of population is south of the Tienshan, or more precisely, in the southwestern corner of the province near the Soviet border. These are the districts of Khotan, Aksu, and Yarkand which contain over two-thirds of the population of the whole province. North of the Tienshan, the greatest concentration is in the Ili valley.

243 According to the figures supplied by Owen Lattimore, the
433 annual wheat crop of Sinkiang before the Communist conquest was about 253,000 tons, about forty-four per cent of the total crop of grain, beans, and seeds. Corn reached 331,000 tons or twenty-eight per cent. Rice was about 71,000 tons or six per cent, and sesame, rapeseed, and linseed accounted for 71,000 tons or six [244] per cent. Barley, kaoliang, sorghum millet, beets, and peas amounted to 119,000 tons or ten per cent. Millet, soybean, and green beans totalled 71,000 tons or six per cent. Total agricultural output was 916,000 tons. (Pivot of Asia, p. 167.)

243 Winter wheat is grown north of the Tienshan where, in spite of the cold, the seeds are protected by the cover of snow; only spring wheat can be grown south of the Tienshan, where lack of snow cover exposes the seed to being frozen in the ground. Wheat is tending to be displaced by rice in oasis fields because the fields are highly alkaline. But the yield of rice is lower than that of corn, because the Uighur farmers do not transplant the young rice [461] shoots as Chinese farmers do. Although the amount of labor [433] expended on a unit of land is about the same in Sinkiang as in China Proper, the yield is somewhat less.

248 Cotton is the most important commercial crop in Sinkiang. It was grown in Turfan as early as the T'ang Dynasty (618 - 907). Two varieties are raised: the native and the American. In 1943, 100,000 acres of cotton were planted, seventy-three per cent with native cotton and twenty-three per cent with seed
288 of the American varieties. Silk is also an ancient crop of com-
433 mercial importance. Its production reached 350,000 kg. in 1942 but fell drastically to 100,000 kg. in 1943.

592 The family group, living together under one roof, is the basic
241 producing unit in oasis agriculture. It often includes married children, which makes it slightly larger than the average farm family in China. While farms in the Tarim Basin average from [423] 4.5 to six acres in size, larger than the 3.5 acres given for China Proper, because the family in Sinkiang is larger, there is only

241 it is calculated that a discharge of one cubic meter per second
312 should irrigate over 6,000 acres, whereas in Sinkiang the figure is estimated at 2,530 acres. There is a lack of drainage to provide for washing out the salt deposited by irrigation and of storage lakes and reservoirs and even small scale tanks. As a result, it is estimated that from a third to a half of the potential supply runs to waste.

One of the most important irrigation practices is the käriz or qanats, a gently sloping tunnel which leads along the axis of an alluvial fan, bringing ground water for irrigation from the upper slope to the surface lower down. The slope of the käriz is somewhat more gentle than that of the fan, and the käriz may be miles in length. A line of wells is dug at intervals and connected at the bottom by a continuous tunnel, three or four feet in diameter. Near the mountains, the käriz may be fifty feet below the surface. As the foot of the slope is reached, the shafts are more shallow, until at last the water emerges into the open air. In this way, ground water at the base of the mountains is tapped and brought to the surface of the plain. When the tunnel caves in or fills with sediment, a distant oasis may need to be abandoned.

241 The construction of käriz involves a heavy capital expense.
312 Some forty years ago, Aurel Stein estimated the cost of a single
471 long käriz in Turfan at over 300 pounds. The risk of failing to
454 find water deters peasants from joining together to dig a käriz, and construction is usually undertaken by wealthy landlords who hire labor. Their reward, when successful, is a monopoly of the water, which they sell to the peasants in return for a share of the harvest. This form of enterprise is so profitable that some landlords sell all their land and invest entirely in käriz.

312 Springs and subterranean flows are supplementary sources of
241 water in some oases. Small pits are used for storage of drinking water in some oasis towns. If these reservoirs are silted and new ones not constructed, the oasis will sooner or later have to be abandoned.

311 The farms surround the oasis, and the utilization of land is
312 determined by the proximity of irrigated land to the middle of the
241 oasis. Land nearest the market places for farm produce receive most of the fertilizer, in the form of night soil, and intensive garden cultivation of vegetables and fruits is practical on this land. Within this zone some cash crops such as apricots and other fruit are usually grown for the market. Beyond this inner area, the amount of fertilizer applied decreases rapidly. Two other zones follow where practically no fertilizer is used and hardier crops such as millet, kaoliang, and potatoes are planted. This land must be fallowed. Beyond this zone there is usually no water and the desert begins abruptly. The fringe area may sometimes be used for grazing, particularly of sheep.